

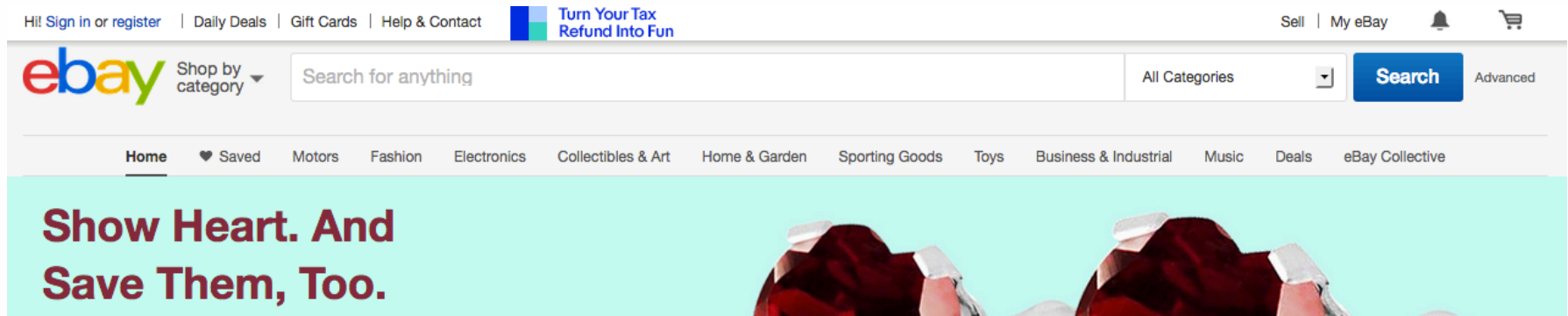
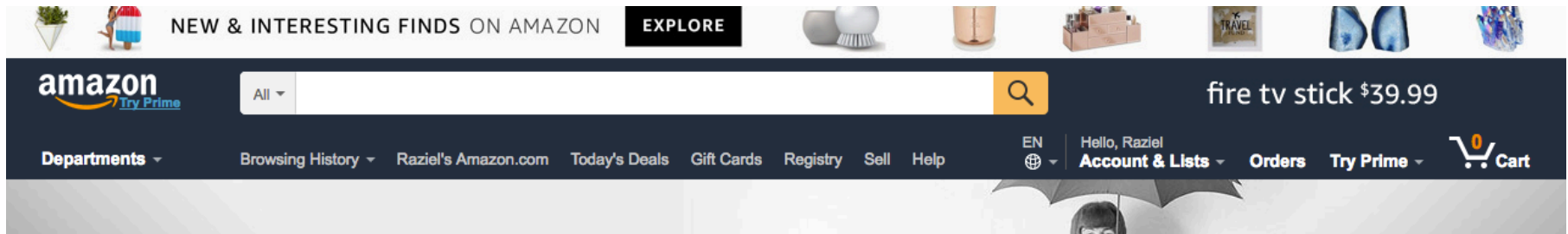
LINGI2145

Cloud Computing

Project: Scalable Online Store

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Online shopping



Real-life development scenario

Project coordinators



Back-end team & Front-end integration



LINGI2145 Project

- Design/implementation of scalable Web application
- Basics on
 - web development
 - back-end and front-end
 - test locally, deploy in the Cloud (Microsoft Azure)
 - scalability
 - load balancing
 - map-reduce
 - recommendation algorithms
- 2 deliverables are expected

1st deliverable

- We provide the front-end of a web application
- Design/Develop (several) back-end μ -services
 - give a correct REST API per service
 - data storage with NoSQL database
 - make service communicate with each other (if needed)
 - link μ -services with front-end
- μ -services support elasticity
- Script your application and write down documentation

Shopping-Cart Application

Provided Front-end

Welcome!

Sign in

Sign up

Log out

No. of
items : 0
Sub
Total : 0



Fruits

Apple
2.34 €/kg



− 1 +

ADD TO CART

Banana
1.69 €/kg



− 1 +

ADD TO CART

Grapes
5.98 €/kg



− 1 +

ADD TO CART

Mango
6.8 €/kg



− 1 +

ADD TO CART

Vegetables

Broccoli
2.73 €/kg

Cauliflower
6.3 €/kg

Cucumber
5.6 €/kg

Beetroot
8.7 €/kg

Front-end development

- Maintain as docker image
- Development
 - React syntax
 - Javascript
 - HTML/CSS
 - rely on a development server
 - deploy once and update the source code
- Data is kept in web storage (not persistent)
- Minor changes in first deliverable



Provided back-end authentication μ -service

- Development
 - Javascript
 - rely on a development server
 - deploy once and update the source code
- Data is kept in memory
- To improve
 - make it REST level 3 with right code numbers
 - store authentication information in NoSQL DB
 - improve security



Authentication μ -service REST API

Method	Uniform Resource Name (URN)	Required parameters	Output
POST	/user	username=[string] & password=[string]	Authentication token
GET	/user/:username	password=[string]	Authentication token

All the best!